

# **Instant Messenger(s) Extension and System Thereof**

## **BACKGROUND OF THE PRESENT INVENTION**

### **Field of the Invention**

001. The invention relates to a network communication, and more particularly, to a communication coupled with instant messengers and the communication apparatuses.

### **Description of the Prior Art**

002. Instant messengers can be used to provide the service of information exchanging. By forming all kinds of information into messages, the communication for exchanging messages can be made by instant messengers. Kinds of instant messengers have been published already, such as windows messenger, MSN messenger, Yahoo Messenger, AIM, ICQ or the like. The foregoing messages can be electrical signals, strings, files, sounds, pictures, images and so on. Messages may be transmitted peer to peer, or be forwarded via a server. Thus, the messages transmission of instant messengers mentioned in the following description comprises the two transmission ways. Referring to Fig. 1A, an instant messenger 12 running on a computer 14 can be registered with an identification 102 by a user, then the identification is online. Each online

identification 102 can exchange messages with other identifications 102 in its contact buddy 104, as long as the others are online, too.

003. However, an instant messenger can only exchange messages with instant messenger published by the same vendor. For example, a first instant messenger and a second instant messenger are running on a computer, and they are different types. Each of them can exchange messages with the same instant messengers running on many different computers. Referring to Fig. 1B, a computer 14 can execute kinds of instant messengers 12, and each kind of instant messenger 12 exchanges messages with the same instant messengers 12. The messages can not only contain text messages, but also contain sound messages and video messages.

004. Because different instant messengers are not compatible, some cross instant messengers software with integrated interface are designed. Most of them can be used for exchanging messages contained text messages. Besides, message contents of individual instant messengers are displayed on a common graphical user interface only, and no messages exchanging between different instant messengers are made. Although such software provide an convenient and integrated environment, but all of the same attended interactions between instant messengers and the user are still

necessary. Namely, a full-functioned integrated software of instant messengers is still not available. Unattended operations and more applications of sound messages or video messages in a full-functioned integrated environment of instant messengers are expected.

005. Network Phone (VoIP) is another way to exchange messages via the network. There are two application of the network phone. One of them uses traditional phones (Mobile phones are included), and the other uses computers and specific protocols. The later uses the sound interface to input or output sounds and transmits messages with the sounds in the specific protocols. The benefits of network phone is money saving for phone fees. However, it will be limited in some specific protocols or some programs for performing with these specific protocols. For coupling with the network and the traditional phones to provide more convenience, a communication apparatus can be used as an intermedium of the phones and the computers. Referring to Fig. 1C and Fig. 1D, a phone 18 is coupled with a computer 14 via a communication apparatuses 16 to construct a network phone. The network phone takes advantage of the network communication abilities of the computer 14 to communicate with other network phones. Or the communication apparatus 16 can be bundled with the network

communication abilities and be coupled with a phone 18 to be a network phone. Besides, the communication apparatus 16 can also be integrated into the phone 18. The foregoing phone 16 is generally known as the audio frequency apparatus and employed as a media for transmitting audio. Moreover, the audio frequency apparatus transmits audio via wired or wireless network and are contingent to have the phone-like shape.

006. Accordingly, less phone fees and more convenience can be made if the advantages of the network phone and instant messengers can be used and the limitation of them can be eliminated.

### **SUMMARY OF THE PRESENT INVENTION**

007. Another main purpose of the present invention is to provide an instant messenger extension for cross instant messengers. By using such an instant messenger extension for nowadays instant messengers, different instant messengers can communicate to each other. The communication is not limited in some specific instant messengers.

008. Still another main purpose of the present invention is to provide a remote controlled instant messenger extension for

providing ambiguous and unattended operation.

009. According to the purposes described above, the present invention provides an instant messenger extension for cross instant messengers. The instant messenger extension includes a message monitor to filter the messages of nowadays instant messengers. For providing an interface extension of a communication apparatus, messages exchanging extends between the communication and remote instant messengers via the local instant messengers. The communication apparatus can further communicate with other remote communication apparatuses to providing them to exchange messages by the communication between instant messengers. Thus, the usage of the instant messengers can be unattended and ambiguous.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

010. Fig. 1A to Fig. 1D are diagrams of the prior arts.

011. Fig. 2A AND Fig. 2B are function block diagrams of the embodiment of the present invention.

012. Fig. 3 is a function block diagram of another embodiment of the present invention.

013. Fig. 4 is a function block diagram of further embodiment of

the present invention.

## **DETAIL DESCRIPTION OF THE PREFERRED EMBODIMENT**

014. Instant messengers can be installed on a digital electrical apparatus (i.e. personal computer, PDA, router or the like) to transform information contents from the local peripherals of the digital electrical into messages and to transmit them to remote instant messengers on remote digital electrical apparatuses via network. Similarly, messages from remote instant messengers can be played or displayed on the local peripherals by the local install messenger. For example, the sounds received by the sound interface can be sent to remote instant messengers by the local instant messengers, or sounds contents within the messages from the remote instant messengers can be sent to the sound interface for displaying. Moreover, an instant messenger may handle different information contents, such as video, audio, text, files or the like. The input and the output are different information contents are handled by different peripherals. On these grounds, instant messengers can transform different information contents from different peripherals into different type of messages or recoveries

different information contents of different peripherals from different type messages. Each type of information contents may be inputted or outputted by one or more peripherals with similar functionality simultaneously. Furthermore, information contents may be switched to input or to output via a group chosen from the proper peripherals. The most common way is to input or to output the information contents according the default setting of the operating system. Thus, the easiest way to switch the peripherals for inputting or outputting is to change the default setting of the operating system. For instance, the default setting for text can be assigned from the monitor to a file (such as a history file of an instant messenger). By way of it, similarly, the output of a sound file can be assigned to the sound interface. Moreover, extra work can be made to gather the same type information contents from or to more than one peripheral. Thus the input and the output of information contents can be redirected by changing the setting of operating system or instant messengers. Accordingly, the redirection for information contents described in the following including the foregoing manners.

015. The original designs of instant messengers for inputting information contents are for manual operations by users or automatic operations by peripherals. For examples, mouse clicking,

keyboard keying in, or the control of other peripherals interacting with users. Then a specific function is executed after a series of operations. The series of operations can be considered as a specific operation (or a macro). Most specific operations are routines, so such specific operations can be covered by or pre-recorded in a macro or a program.

016. Moreover, messages exchanging can be considered as a communication. The communication can be unidirectional or bi-directional. Instant messengers may have to perform some procedure during communication. For examples, a communication may have to complete handshaking before it is constructed if the security is concerned. Namely, the peer that asks for communication must acquire the acceptance from another peer to construct the communication. Of course, the communication won't construct or destroyed if the response of rejection or a notice of disconnection is received. The request, acceptance, rejection, disconnection or the like are contained in messages within the communication between instant messengers. Thus, some key message segments corresponding to them can be found and defined. Accordingly, messages monitoring in accordance with these key message segments can recognize some messages that contain these special meanings. These key message segments can be text



segment, file segment, audio segment, video segment or the like, and the manners for monitoring may be string filtering, file certification, audio recognition, video recognition or the like respectively. The present invention does not limit the manner for monitoring.

017. Accordingly, the present invention presents an instant messenger extension for providing a extent interface of instant messengers with communication apparatuses. Moreover, the communication apparatuses can communicate with remote communication apparatuses via communication network to provide unattended operations. For examples, the combination of phones and instant messengers can make conversations possible on Internet. Furthermore, users can use a phone to communicate with the phone connected to the instant messenger extension for providing unattended and ambiguous operation and communication.

018. Thus, one preferred embodiment of the present invention is a method for instant message extension. Referring to Fig. 2A, firstly, step 210 filtering the message of at least one kind of instant messenger. That is, monitoring messages of instant messengers by the manners described above to filter out the messages contained key message segment. The type of messages, instant messengers and manners for filtering key message segments are not limited in

the present invention. Then step 220 acknowledges a communication extension by using a notice. The communication extension can be considered as the extend user interface of instant messengers. That is, an extra user interface is provided outside the instant messengers. Moreover, the notice is generated and sent when key message segments within a message or messages are recognized. The foregoing notice can be a request, an order, or an instruction for other external apparatuses. Furthermore, instant messengers can be automatically controlled as shown in step 230. The instant messengers are automatically controlled by a signal generated by the communication extension according to the notice.

019. Hence, communication extension may be asked to respond or to execute some functions when the local instant messenger receives a message contained the above mentioned key message segment. The manner for responding can be sending a signal, a message, a remote procedure call and so on. The present invention does not limit the manner for responding. When the key message segment is a request that means some kind invention (such as audio exchanging, video exchanging, file transmission or so forth), the communication extension must respond an acceptance or a rejection. Besides, a time out response may be responded because of no answer after a default time threshold. Such a time out

response can be considered as a rejection.

020. Furthermore, the communication extension can include some inputs or outputs for some information contents for providing extran inputs or outputs of instant messengers. Referring to 2B, step 240 can further redirect the inputs or outputs of instant messengers. That is, some inputs or outputs of instant messengers can be assigned to the inputs and outputs of the communication extension. For instance, after redirecting, an audio input of the communication may become the audio input of an instant messenger, and the sounds received by the audio input of the communication will be transformed into messages and sent to other instant messages. These information contents handled by the inputs and the outputs can be text, file, audio, video or the like. Moreover, an input or a output can be assigned to be the input or output of one or more instant messengers. That is, an information contents received by a local instant messenger can be received by other local instant messengers, thus cross instant messengers communication can be performed. In the present invention, the manner of redirection will not be limited.

021. The communication extension can not only respond passively, but also actively send a request to instant messengers,

applications, operating system, other software or hardware. For examples, the communication extension can request a shut down signal to the operating system. This can be designed for automatically controlling the instant messengers, other software or hardware. The automatically controlling can be above-mentioned manner for executing a specific operation, automatically answering or responding, or other convenient manners to replace the operation of users.

022. Moreover, the inputs or outputs of the communication extension can be provided from the hardware or software connected to it. The hardware or software can be audio or video apparatuses, communication apparatuses or the remote apparatuses for communicating with the communication apparatuses, the input or output emulated by software, or other hardware for inputting or outputting. For examples, the communication extension can include at least a communication apparatus. The input or output of the communication apparatus can be used for the input or output of one or some instant messengers. The communication apparatus can communicate with a remote communication apparatus via the telecommunication network. Then the input or output of the remote communication apparatus can also be used to be the input or output of the instant messengers. Besides, the communication

apparatus can include a user interface for interacting with users to generate the above mentioned signal. The above-mentioned signal can also be generated according to the interaction with the user caused by operating the user interface of the communication apparatus.

023. Therefore, the communication apparatus can prompt the user to respond when a notice is received if the notice means to request a response. The manner for prompting can be ringing, lightening or so forth. If the user answers the request, the communication extension responds a signal. Besides, the communication extension can automatically responds a signal when no answer from users after time out. The signal can be above mentioned acceptance (answered by users), rejection (answered by users), disconnection (answered by users or automatically generated), time out (automatically generated) or the like. For examples, the communication can be a phone or an answering machine. When a request arrives, a acceptance is responded if the user answers the phone or the answering machine automatically answers. Of course, the user can reject the request by some kind operation or just hang up the phone, and then a rejection or disconnection would be responded separately. Moreover, the communication extension can control the communication apparatus to call a remote

communication apparatus via telecommunication network. The foregoing acceptance, rejection, disconnection can be responded according to the operation that user made with the remote communication apparatus. The remote communication apparatus can be a phone, mobile phone, modem, fax machine, answer machine and so on.

024. Accordingly, another preferred embodiment of the present invention is an instant messenger extension system. In the preferred embodiment, an instant messenger monitor for monitoring the messages of one or more instant messengers and a foregoing communication extension are used. The instant messenger monitor can use to perform above-mentioned filtering messages of at least one kind of instant messengers (step 210), acknowledging a communication extension (step 220) and automatically controlling said instant messengers (step 230). Thus, the preferred embodiment can be used for widespread extension of instant messengers. By connecting to the communication apparatuses, the instant messengers can have the ability for unattended and ambiguous operation.

025. Fig. 3 is a diagram of the instant messenger extension system in the preferred embodiment. The communication

apparatus 36 and the remote communication apparatus 38 can be a phone (such a telephone, mobile phone or so on.), answering machine, modem, fax machine or the like. Besides, the communication apparatuses can also be an ASIC built in the communication extension or any communication apparatuses connected to telecommunication network (such as a modem). The communication apparatuses are used for communicating or exchanging information contents, the sort or type of the communication apparatuses does not limited in the present invention. For instance, the phone (or the communication apparatus 36) prompts (such as ringing) when the communication extension 34 receives the above-mentioned request, and the above mentioned signal will be responded when the phone is answered (i.e. the telephone transmitter is picked up). Besides, the phone can be used for sending signals by dialing. For examples, generate a specific signal by a specific number dialing, instant messenger 12 will be automatically controlled to construct a communication with a specific remote instant messenger 12. The specific number dialing can also be done by following the instructions of the voice response. Moreover, the communication extension 12 can control the communication apparatus 36 to dial a phone number according the message contained a key message segment and the phone number corresponding to a remote communication apparatus 38.

026. In accordance with the present invention, the design of the connection with the communication extension and the communication apparatuses make the usage of instant messengers more convenient and simpler. Namely, users can use an instant messenger to control the communication apparatuses and vice versa. Therefore a further preferred embodiment of the present invention is an instant messenger extension system that includes a communication extension. Comparing to the prior embodiment, the preferred embodiment requests the communication extension a response when some events are triggered and does not need to monitor messages of instant messengers. Besides, the communication extension can control instant messengers directly. Furthermore, the input and output provided by the communication extension can be assigned directly to be the input and output of instant messengers. Therefore, there is no redirection needed during messages exchanging. The only differences between the preferred embodiment and the prior embodiment are no messages monitoring and redirection in the preferred embodiment. Hence, no redundant detail is described herein.

027. Accordingly, the still further preferred embodiment of the present invention is an instant messenger extension. Referring to



Fig. 4, firstly as the description of step 210, monitoring and filtering the messages of at least one instant messenger. Then automatically responding to each request within messages from the instant messengers, referring to step 420. The foregoing automatically responding is triggered when a key message segment is filtered out in the step 210. Next, as described in step 240, redirect the input and the output of said instant messengers. Each key message segment corresponds to a predefined above-mentioned specific operation to be a reaction for the above mentioned automatically responding. For examples the specific operation is to respond an acceptance when the request means to ask a communication for exchanging messages, and message exchanging begins after said automatically responding. Furthermore, the redirection of the input or output can be made before or after the above mentioned automatically responding. The inputs and outputs of instant messenger can be assigned to files. Moreover, the key message segment can be transform into request to external apparatuses, and the automatically responding can be made according to the response from the external apparatuses. By redirecting to files, the present invention can record the incoming informing contents. The preferred embodiment can further add automatic voice (video) response to having the abilities of automatic voice response, automatic video response, automatic file receiving and transmission,

automatic fax receiving and transmission and so on.

028. According to the design of the present invention, users can use wired/wireless communication apparatuses (such as phone or mobile phone) to remote control instant messengers running on a digital apparatuses, whereby the unattended and ambiguous message exchanging between instant messengers is available. The foregoing instant messengers include Windows Messenger, MSN Messenger, AIM, Yahoo Messenger, ICQ or the like. By automatically responding with a specific operation, remote software controlling are also available.

029. What are described above are only preferred embodiments of the invention, not for confining the claims of the invention; and for those who are familiar with the present technical field, the description above can be understood and put into practice, therefore any equal-effect variations or modifications made within the spirit disclosed by the invention should be included in the appended claims.